

ANNALS *of* PHYSICS

Editor

Herman Feshbach

Assistant Editors

Henry Ehrenreich
Roman W. Jackiw

Arthur M. Jaffe
William H. Press

Editorial Council

J. D. Bjorken
D. Brink
P. G. De Gennes
J. Eisenberg
G. Field

S. Hanna
V. Hughes
L. Kadanoff
B. Mottleson
L. Okun

J. Peoples, Jr.
E. Picasso
D. Scalapino
I. I. Shapiro
K. Wilson

Founding Editors

Philip M. Morse
Bernard T. Feld Herman Feshbach Richard Wilson

VOLUME 200 • 1990



ACADEMIC PRESS, INC.

Harcourt Brace Jovanovich, Publishers

San Diego New York Boston
London Sydney Tokyo Toronto

Copyright © 1990 by Academic Press, Inc.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (27 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1990 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0003-4916/90 \$7.50

This journal is printed on acid-free paper.



Printed by Catherine Press, Ltd., Brugge, Belgium

CONTENTS OF VOLUME 200

NUMBER 1, MAY 15, 1990

H. OSBORN. General Bosonic σ Models and String Effective Actions. . . .	1
R. GRIMM. Left-Right Decomposition of Two-Dimensional Superspace Geometry and Its BRS Structure	49
JONATHAN L. ROSNER. Reflectionless Approximations to Potentials with Band Structure	101
W. BENTZ, A. ARIMA, AND H. BAIER. Chiral Symmetry and the Axial Current in Nuclear Matter	127
LOWELL S. BROWN. Compton Scattering in a Plasma	190
A. HEIL, A. KERSCH, N. A. PAPADOPOULOS, B. REIFENHÄUSER, AND F. SCHECK. Anomalies from Nonfree Action of the Gauge Group	206
ABSTRACTS OF PAPERS TO APPEAR IN FUTURE ISSUES	216

NUMBER 2, JUNE 1990

S. IIDA, H. A. WEIDENMÜLLER, AND J. A. ZUK. Statistical Scattering Theory, the Supersymmetry Method and Universal Conductance Fluctuations	219
G. BARTON. On the Finite-Temperature Quantum Electrodynamics of Free Electrons and Photons.	271
H. KRIVINE, M. CASAS, AND J. MARTORELL. Semiclassical Expansions for Confined N Fermion Systems	304
MIGUEL E. ORTIZ. Homogeneous Solutions to Topologically Massive Gravity	345
T. DITTRICH AND R. GRAHAM. Long Time Behavior in the Quantized Standard Map with Dissipation	363

ERRATUM

Volume 194, Number 2 (1989): M. B. Halpern, "Direct Approach to Operator Conformal Constructions: From Fermions to Primary Fields," pp. 247-280	422
---	-----

ABSTRACTS OF PAPERS TO APPEAR IN FUTURE ISSUES	423
AUTHOR INDEX FOR VOLUME 200	425

